

REMARKS:

Claims 1, 4-10, 12-14 and 23-27 are currently pending. Claims 5 and 8-10 and 12 are amended. Claim 23-27 are new. The Specification has been amended. No new material has been added.

Specification

The Examiner objected to the amino acid sequence for SEQ ID NO:2 as listed in the instant Specification. The Examiner is directed to page 22 of the substitute Specification attached hereto wherein the sequence recited in figure 2 is identified as SEQ ID NO: 2. Moreover, Applicants have amended the instant Specification to include SEQ ID numbers for all the artificial DNA sequences – primers – recited in said Specification. Favorable action is solicited.

Sequence Listing

A paper copy and a computer readable form of the Sequence Listing is attached hereto.

The content of the paper copy of the Sequence Listing submitted and the copy of the Sequence Listing in computer readable form attached herein is the same and no new matter was added. It is believed that by submitting the present amendment and sequence listing compact disk, the application now fully complies with the requirements of 37 CFR 1.821-1.825.

Claim Rejections under 35 USC § 112 ¶2

Claims 8-9 and 11-12 are rejected for allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention.

Applicants respectfully disagree. Nonetheless, Applicants have amended Claims 8-9 and 12 in light of the instant rejections. Claim 11 is canceled and said rejection of said Claim is moot. Favorable action is solicited.

Claim Rejections under 35 USC § 112 ¶1

Claims 1 and 4-14 are rejected for allegedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains,

or with it is most nearly connected, to make and/or use the invention. Applicants respectfully disagree.

Applicants reiterate the arguments of record for the instant rejection and add the following.

Contrary to the Examiner's assertions, the Specification does provide sufficient disclosure with its examples to practice the instant invention based on the requirements of the MPEP and Federal Circuit case law. The MPEP states that a "[d]escription of a representative number of species does not require the description to be of such specificity that it would provide individual support for each species that the genus embraces" and as such, a single species may be enough to identify the entire genus (*see* MPEP 2163.II.A.3.a.ii.). Moreover, a recent Federal Circuit case supports the statements of the MPEP. When discussing what is required for a written description the court said "[t]he 'written description' requirement states that the patentee must describe the invention; it does not state that every invention must be described in the same way. As each field evolves, the balance also evolves between what is known and what is added by each inventive contribution" (*Capon v. Eshhar*, 418 F.3d 1349, 1358; 2005).

Further, it is not necessary that the application describe the presently-claimed invention exactly, but only sufficiently clearly that one of ordinary skill in the art would recognize from the disclosure that the appellants invented it. (*See In re Edwards*, 568 F.2d 1349, 1351-52 (C.C.P.A. 1979); *In re Wertheim*, 541 F.2d 257, 262 (C.C.P.A. 1976)) "[T]he PTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims." *Wertheim* at 263.

The skill in the art at the time of filing was such that one of ordinary skill would have been in possession of the instant invention at the time of filing. Accordingly, Applicants assert that the instant Specification at least meets the requirements as set forth in the MPEP and the Federal Circuit.

Applicants urge that the Examiner is requiring conclusive evidence that one of ordinary skill in the art would be able to make and use the claimed invention using the application as a guide. MPEP 2164.05 states that the enablement evidence provided by the Applicant need not be conclusive but merely convincing to one skilled in the art. Applicants assert that sufficient information has been provided in the disclosure of the instant Specification for one of ordinary

skill in the art to practice the instant invention without undue experimentation. Therefore, the instant disclosure exceeds the aforementioned standards.

For at least the reasons mentioned above, any skilled artisan would envisage the instant invention based on the instant disclosure and would need to perform undue experimentation to practice said instant invention. Accordingly, Applicants respectfully request withdrawal of the rejection under 35 USC 112 ¶1. Favorable action is solicited.

Claim Rejections under 35 USC § 102

Claims 1 and 4-8 are rejected for allegedly being anticipated by US 5,846,784. Applicants respectfully disagree.

Anticipation can only be established by a single prior art reference which discloses each and every element of the claimed invention. *RCA Corp. v. Applied Digital Data Systems, Inc.*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). The identical invention must be shown in as complete detail as it is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Applicants reiterate the arguments of record and reemphasize the assertion that US 5,846,784 teaches an epoxidase. The Examiner is directed to the following in light of the fact that the Examiner compares SEQ: ID NO:4 of the cited art to instant SEQ ID NO:2.

a) column 3, lines 48-50:

SEQ ID NO:4 is the deduced amino acid sequence of a *Veronia galamenensis* fatty acid **epoxidizing enzyme** derived from the nucleotide sequence of SEQ ID NO:3 (emphasis added)

b) column 9, beginning at line 3:

The nucleotide sequence encoding the *Veronia galamenensis* fatty acid **epoxidizing enzyme** is provided in SEQ ID NO:3 and the deduced amino acid sequence is provided in SEQ ID NO:4. (emphasis added)

c) column 14, paragraph beginning at line 41:

The sequence of clone vs1.02c07 is also quite divergent from the castor bean fatty acid hydroxylase, sharing only 52.5% similar residues. The sequence of vs1.02c07 is therefore unique, but nonetheless related, to the class of enzymes which is known to contain enzymes capable of producing different modifications in the acyl chains of fatty acids. Sequence alignments, BLAST scores and

probabilities and experimental data demonstrating a tissue-specific expression pattern (see Example 3) for the gene encoded by the cDNA clone vs1.02c07 indicate that **the instant nucleic acid fragment comprising this clone encodes a *Vernonia galamenensis* fatty acid epoxidizing enzyme.** (emphasis added)

Applicants assert that the instant Application, dissimilarly to the cited art, teaches a desaturase and as such, is novel over said cited art. Moreover, in view of Applicants new Claims, the cited art fails to read on the instant invention.

Since the cited art does not teach each and every element of the pending Claims, it does not anticipate said Claims. Applicants therefore respectfully request withdrawal of the rejection under 35 USC § 102(b). Favorable action is solicited.

Claim Rejections under 35 USC § 103

Claims 1, 4-12 and 14 are allegedly unpatentable over US 5,850,026 in light of US 5,846,784. Applicants respectfully disagree.

To establish *prima facie* obviousness, the Examiner must show in the prior art some suggestion or motivation to make the claimed invention, a reasonable expectation for success in doing so, and a teaching or suggestion of each Claim element (*see, e.g., In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ 2d 1941 (Fed. Cir. 1992); *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986); *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)).

Applicants reiterate the arguments of record. Further, Applicants assert similar arguments as listed above for the §102 for the traversal of the instant §103 rejections. Accordingly, a *prima facie* case of obviousness has not been established by the Examiner, and the rejection under 35 USC § 103 should be withdrawn. Favorable action is solicited.